



Arrowheadlines

The Newsletter of the Loveland Archaeological Society

JUNE 2020



Club Minutes

Once again, no meeting minutes as there was no June meeting of the Loveland Archaeological Society. Current statewide and local restrictions prohibit our meetings and events at this time. The City of Loveland currently has no update on if we can hold our August picnic meeting in Dwayne Webster Park, and cannot book the Deveroux Room at the Rialto Theater as of today. These restrictions can change at anytime... or not. The Ranch is completely closed to the public and all events cancelled through July 4th. This date could be extended. They will reassess every 30 days. We will have to make a decision on whether to cancel the Stone Age Fair very soon in fairness to our exhibitors and everyone involved. Cross your fingers.

On a more positive note, the Harris Ranch, located at 25 Harris Ranch Rd. in Bosler, Wyoming, will be open for LAS members on July 4th and 5th for artifact hunting. The Ranch is about 20 miles north of Laramie off Hwy. 287 and CR 51. If you go, be respectful - no fires, shooting guns or fireworks; stay on ranch roads only, and close all gates behind you as this is a working cattle ranch. The wind has really been blowing recently and exposing some fine artifacts. We encourage everyone to send in photos of their finds. We're sad to report that former LAS Vice-President, Miki Roth, passed away recently here in Loveland. Miki and her late husband Marv were active and longtime Club members. *Best, Andy and Sandy*

Also: The Powars II site located near Sunrise, Wyoming, is a significant Paleoindian site in the Hartville Uplift area of eastern Wyoming. Intensive red ochre mining took place at Powars II, as indicated by Paleoindian materials in direct association with a natural hematite deposit. Projectile points ranging in age from Clovis to Late Paleoindian have been recovered, as well as stone and bone tools, shell and bone beads, and several pieces of incised bone. Dr. George Frison is strongly associated with this site as well. If you missed the tour last year, here's another opportunity this upcoming August 15th.

ARCHAEOLOGY AT SUNRISE MINE
A GUIDED TOUR OF
Powars II
SATURDAY, AUGUST 15, 2020

PALEOINDIAN RED OCHRE MINE & HISTORIC TOWN OF SUNRISE MINE TOURS
Proceeds to benefit the Western History Center
3-hour mine & town tour leaves at 1:00
\$20 for adults • \$35 for family
11:30 Gates Open - Sunrise
Lunch Available For Purchase
No-host BBQ at Miners & Stockman's Steakhouse to follow the tour

Please No Credit Cards
Call George Zamboni for info
(957) 575-2010

Don't miss this once in a life-time opportunity
(wear old shoes - they will get stained red)



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LAS Finds of the Month

Andy and Kevin in Artifact Heaven

Andy and Kevin had an epic day on May 24th in rural Adams County, Colorado. As Andy tells it, *“having just received permission from the landowner, we were exploring the site. I found the first one fully exposed on a weathered terrace just above a creek, an absolutely perfect Pelican Lake made out of translucent chalcedony, about 2 inches long. I was sure I had the Find of the Month and so was Kevin. HOWEVER, 30 minutes later while hunting in another blowout higher on the ridge, Kevin found another point even bigger, a perfect Pelican Lake made out of Petrified Wood, about 3 inches long. WOW! I know some of our hunters have much better luck, but for Kevin and I these were our best finds in years of hard hunting”*.

The following is photographic proof positive of their intrepid adventure. Left to Right: Andy’s in-situ point, Kevin’s in-situ, Mine’s bigger than yours, Andy’s translucency, Andy’s 2020 finds to date.



Some other of our members' recent finds...



Mt Albion point found by Robin Guthrie, Adams County, CO.

In Situ Iron Point found by Myra Westfall, Eastern Colorado



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Archaeology in the News

Fishermen Caught a 10,500-Year-Old Giant Irish Elk Skull—Antlers and All

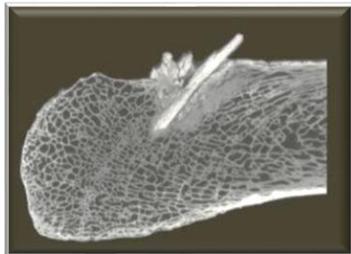
Submitted by Jim and Joyce Mountain



The Irish elk (*megaloceros giganteus*) has been extinct in Ireland for about 10,500 years. So, you can imagine how surprised two fishermen were when they pulled up their net and discovered a prehistoric elk skull, with antlers attached, as their catch of the day. As *Smithsonian* reports, Raymond McElroy and Charlie Coyle were fishing in Ireland's Lough Neagh, a lake near the town of Ardboe, when they thought their net had snagged on a piece of driftwood. However, when they

finally managed to hoist it out of the water, they discovered the skull with antlers measuring over six feet across. "I thought it was the devil himself," Coyle told *The Irish Times*. "I was going to throw it back in. I didn't know what to do with it." McElroy, however, recalled that a jawbone of an ancient Irish elk (possibly from the same animal discovered by the fishermen) was caught in the same area in 2014. For the time being, he's keeping the skull in his garage. This particular elk probably stood about 6.5 feet tall. It's worth noting, though, that the name "Irish elk" is a bit of a misnomer. The animal is actually classified as a type of deer—in fact, the largest deer to ever have existed. The "Irish" part of the name stems from the fact that fossils of the animal are often discovered in Ireland's lakes and bogs, which help preserve the bones. However, the animals once roamed throughout Europe, North Africa, and parts of Asia. It was roughly the same size as a modern-day moose, weighed about 1300 pounds, and some animals needed a clearance of 13 feet just to squeeze their antlers between the trees. "Giant antlers aren't great in the forest," Mike Simms at the Ulster Museum tells *Belfast Live*. "Environmental change is what caused their extinction." And thus, the Irish elk joined giant sloths, giant beavers, saber-toothed tigers, mastodons, and mammoths in the enormous extinct animals club, never to be seen again (or at least until the next fishing expedition).

Paleo CSI: Early Hunters Left Mastodon Murder Weapon Behind



High-tech CT scans show the point embedded in the mammoth's rib bone

A new look at a very old mastodon skeleton has turned up evidence of the first known hunting weapon in North America, a tool made of bone that predates previously known hunting technology by 800 years.

The sharp bit of bone, found embedded in a mastodon rib unearthed in the 1970s, has long been controversial. Archaeologists have argued about both the date assigned to the bone - around 14,000 years old - and about whether the alleged weapon was really shaped by human hands. But now, researchers say it's likely that 13,800 years ago, hunters slaughtered elephant-like mastodons using bony projectile points not much bigger around than pencils, sharpened to needle-like tips.



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"We're fortunate that the hunter 13,800 years ago was probably trying to get that bone projectile point in between the ribs, probably trying to get at a vital organ," said study researcher Michael Waters, an anthropologist at the Center for the Study of the First Americans at Texas A&M University. "Maybe the mastodon flinched, or his thrust was off, and he hit a rib instead and broke his bone projectile point. So, it's bad for him, and good for us."

Uncovering a kill site

One thing is for sure: The ancient mastodon kill wasn't a fair fight. The creature, unearthed by a rancher digging a stock tank in the late 1970s in Washington state, was old and likely sickly when it died, with teeth "quite literally worn down to a nubbin," said Donald Grayson, an anthropologist at the University of Washington who was not involved in the new study.

The rancher turned the site over to archaeologists, who returned the favor by dubbing the find the "Manis Mastodon," the rancher's surname. The archaeologist's claim that the mastodon was hunted down by humans about 14,000 years ago was regarded with suspicion among other researchers, however, who pointed out that there was no solid proof that the bony point found embedded in the mastodon bone was made by human hands. It was possible, Grayson said, that the bone was a part of the mastodon's own skeleton, perhaps even a dislodged bone chip from a fight with another animal.

Paleo cold case

But archaeological technology today is leaps and bounds past what it was in the 1970s. So, Waters and his colleagues decided to take another look at the case of the Manis Mastodon. They extracted bone protein from the damaged rib and radiocarbon-dated it, an advanced version of the dating technique used four decades ago. Sure enough, they found that the specimen dates back 13,800 years. That's 800 years earlier than the North American Clovis, who were known to hunt mammoths and mastodons. But Waters and his colleagues also needed evidence that the bony tip embedded in the rib was man-made. To investigate, they used a high-resolution computed tomography (CT) scan. "We're all familiar with hospital CT scanners where they can scan your body and look inside to see organs and bones," Waters said. "This is a high-resolution industrial version that creates digital X-rays spaced every 0.06 millimeters [0.002 inches], about half the thickness of a piece of paper."

This ultra-sharp look inside the rib revealed the needle-sharp shaft of the projectile point lodged inside the mastodon's bone. The images suggested the point had been whittled down and sharpened, Waters said, the work of human hands. To top it off, the researchers extracted bone protein and DNA from the projectile point itself, determining that the weapon had been made from the bones of yet another mastodon.

"That was even more exciting, because what that meant is whoever these hunters were that tracked down and killed the Manis Mastodon were hunting with weapons made from a previous kill," Waters said.

Pre-Clovis hunters

Other anthropologists warned that it's difficult to conclusively understand an archaeological site given only one artifact, but said the find went a long way to putting the mastodon controversy to bed.

"It's very convincing," said James Dixon, the director of the Maxwell Museum of Anthropology at the University of New Mexico, who was not involved in the current study. Other mammoth and mastodon butchering sites from the same time period have been discovered (albeit without hunting weapons), Dixon said, and the new mastodon analysis adds to the evidence that human hunter-gatherers were killing the big, woolly creatures before the Clovis culture came along.

"To me, the high-quality scan strongly suggests that this really is a bone projectile point, and that this is another pre-Clovis site," Grayson agreed.





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If so, he said, it's the third confirmed pre-Clovis archaeological site, including the northern Patagonia settlement of Monte Verde from about 14,800 years ago and the Paisley Caves in Oregon, where scientists uncovered 14,300-year-old human feces. So how did these early hunters kill a creature the size of an



elephant with weapons the size of pencils? It's possible that groups of hunters ganged up on a mastodon and threw their projectile points like spears until the animal looked "like a pincushion," Waters said. The Manis Mastodon was nicked in an upper rib, consistent with the use of an atlatl, or spear-thrower, a hollowed-out shaft used to get more speed and leverage behind a thrown spear, Dixon said. Or maybe that mastodon was already on its last legs before the human hunters finished it off, Grayson suggested. "It is fully possible that this poor guy was not standing when killed and might actually have been lying down and in the process of dying on his

own," Grayson said. "That would solve the problem of having someone tall enough, or up high enough, to stick it in the back."



In Our Own Backyard

Sapinero House: A Prehistoric Structure on the Mesa

By Mike Pearce

Despite conventional belief among archaeologists that Prehistoric visitors to the Colorado High Country were essentially non sedentary travelers who constructed rudimentary shelters, some findings as part of the Lake Fork Archaeological Survey suggest that there were occasions when more substantial dwellings were built. One of two such structures is LF 1258, referred to here as Sapinero House, is located on Sapinero Mesa about 40 miles north of Lake City and is near what appear to be traces of an old Indian trail. While nothing structural remains of the early house, some clues have been located during a careful surface search of the area. First is an area about ten feet across, notable for a black, ashy soil deposit up to twelve inches deep. Microscopic study of the black soil will likely provide additional information about the people who occupied Sapinero House: what they ate, during what time period they lived there, what diagnostic tools they left behind, and where their toolmaking lithic material originated. Further external information about the house and its use is found in the stone artifacts found in and around the structure. One such artifact, located on the level bench immediately north of Sapinero House, was a slab type metate, used for grinding seeds into flour for cooking. Studies have shown that plants with edible seeds - grasses, trees, and the like - available for harvest from wild plants of the area, offered early people one means for helping feed themselves while occupying a living space for longer than limited stays associated with a single event game kill or other brief stopover. The limited sedentism associated with places like Sapinero House made it possible for women and children to collect foods like wild onion, nuts, berries, insects, and more. Utilizing natural seasoning like sage and oregano and grilled game meats made possible the preparation of nutritious, aromatic stews with venison, rabbit, or other foods providing flavor and protein.



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On the level part of the site there was a scatter of game processing tools: fragments of knives, scrapers, and so on, all pointing to the probability that inhabitants of the house were harvesting and processing game animals for food, clothing, and other uses. Another example of a useful artifact recovered from the site was a projectile point made from obsidian, a volcanic glass not found naturally in the Lake Fork Drainage. This lithic material could have been obtained through trade, a possibility that is strengthened by the fact that Sapinero House was apparently located on an old Indian trail used for traveling from the Lower Gunnison Basin across Sapinero Mesa and into the Lake Fork Valley. Plentiful game, including deer, elk, and more, along with plentiful outcroppings of quartzite, jasper, petrified wood, etc., could have provided ample materials for trade. If the obsidian wasn't traded to inhabitants of Sapinero House, it could have been brought there by travelers. Further lithic diagnostics are found in the lithic flakes discarded during toolmaking, as well as in the fragments of finished tools, some



of them exhibiting heat pops - "pot lids." All projectile points recovered, including the obsidian point, are diagnostic of the Mountain Archaic Period that spanned the time from 7,000 years ago to about 500 A. D. During the study of lithic materials from the site, it was important to look for patterns of origin of toolmaking stone. Did the lithics seem to come from local quarries, or were they brought from elsewhere? If there were a predominance of local stone, it would suggest that residents of Sapinero House stayed for an extended time, utilizing local area stone to make tools. The inventory of lithic stone is varied, including quartzite, chert, jasper, and other silicates, all available in the area. In contrast, other individual sites studied in the Lake Fork had predominance of obsidian, a material not available in the immediate area. Further study of the site as part of professional research may reveal the presence of other foods, vital for overwinter sustenance. Investigation of a similar structure near the Colorado River showed that residents utilized foods like cactus with thorns removed, that could be stored for use during cold weather months. Early people also knew how to dry meat and other fresh foods and also how to incorporate them into pemmican, a grease-based preservative. Further resources associated with Sapinero House included a freshwater spring and wetlands, providing wild berries and other edible plants. Limited quantities of tall sage, pine, and aspen could have provided material for cook fires and for the cribbed construction likely utilized in building the structure. A construction fact is that ground stone axes, commonly used for shaping limbs and logs for building houses elsewhere in the region are missing from the stone tool inventory throughout the Lake Fork Drainage. A boulder field of quartzite can be found nearby, as can be below ground or ridge line outcrops of jasper, petrified wood, and other stone suitable for toolmaking. The fire that ended the active life of Sapinero House could have been accidental or deliberate, the dry branches, brush, grasses, and other construction materials supplying ample combustible fuel for a hot fire when the house went up in flames. Other evidence of fire are the "pot lids" on chipped stone artifacts and discard flakes found in and near the charcoal and soot stained soil.

In summary, sometime during the Mountain Archaic Period, between two and five thousand years ago, humans constructed a cribbed, wood and daub house on Sapinero Mesa and used it for an undetermined length of time. During the occupation of this structure, inhabitants hunted game, prepared, and consumed plant foods, manufactured tools, and clothing, and possibly carried on trade with travelers traversing a nearby trail. Acknowledging the limitations of a surface collection survey, the information in this article is offered from the standpoint of observations and suggestions. More precise information and conclusions await the efforts of professional archaeological researchers.



The Devil's Backbone

The Devil's Backbone is an unusual geological formation, a two-mile strip of Dakota sandstone that rises from the rock and soil in a buffer zone between mountains and plains west of Loveland. Like its sister hogbacks common along Colorado's Front Range, including Roxborough State Park and Garden of the Gods, this Larimer County landmark has its own ghoulishly beautiful character. Pinnacles rising more than 200 feet above surrounding valleys are eroded into angular arches; the most famous portal is the Keyhole. The Backbone's crags are safe haven for nesting raptors like red-tailed hawks and great horned and barn owls. Mammals like mule deer, elk, and mountain lion lurk under its slopes. A yellow flower of the rare Bell's twinpod, grows here and in a few isolated spots in Boulder and Jefferson County – and nowhere else in the world.



Prehistoric fossils are discovered here, too, including an ancient mammoth with 5-foot-long tusks now on display at Chicago's Field Museum.

The area once was frequented by Arapaho, Cheyenne, and Ute Indian tribes. The rock formations hold a host of devilish hazards, including frequent lightning strikes, nests of active rattlesnakes, and legendary burial grounds. With such a wealth of human and natural history, the Backbone resembles the state of Colorado as a whole. The vast, grassy prairie to the east gently rolls toward an imposing rocky spine and over that apex waits a western slope that captures the warm light of sunset.



ARTIFUNFACTS TRIVIA QUIZ

Last Month's Trivia Question: In this era of lockdown, **ARTIFUNFACTS** is going Global. What is the oldest known settlement yet discovered by archaeologists? Hint: It's not in the US.



Answer: Theopetra Cave in Thessaly, Greece at 135,000 years old. Discovered in 1987, it has been occupied from the Palaeolithic, Mesolithic, and Neolithic periods. Besides a treasure trove of artifacts, archaeologists' discoveries include children's footprints and man-made walls to keep out the cold winds.

This Month's Trivia Question: *So, you want to be an Archaeologist when you grow up?* According to the US Bureau of Labor Statistics, the average annual salary for an Archaeologist in the United States is how much per year?